Consumers’ Green Purchase Decision: A Study in Durg City

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ABSTRACT

Indians are more concerned about environmental issues which are causing impact over their health. Various environmental issues that are affecting human health directly or indirectly are pollution (air, water, and land), climate change, global warming etc. This led to change in their behavior towards environment and finally resulted in shifting consumer’s behavior towards buying and using eco-friendly products also called as green products. Considering above background this paper is an attempt to study the green consumer behavior for respondents in Durg city. For the purpose of study 50 respondents were sampled purposively. Finding of the study indicate that consumers green purchase decision in Durg city is influenced by their environmental concern and attitude towards green products.

Keywords: Environmental concern, Awareness of green products, Attitude towards green products, Green purchase behavior, Multiple Regression.

INTRODUCTION:

Indians are more concerned about environmental issues which are causing impact over their health. Environmental concern includes collection of beliefs, affects & behavioural intentions a person holds regarding environment related activities or issues (Luo & Deng, 2008; Schultz et al., 2004). Various environmental issues that are affecting human health directly or indirectly are pollution (air, water, and land), climate change, global warming etc. This led to change in their behavior towards environment like recycling, energy saving, water conservation (Kim, 2002; Kim & Chai, 2003, 2005) and finally resulted in buying and using eco-friendly products also called as green products.

Green Products:

Environmental protection agency (2011) defines green products as products made in a way to reduce their environmental impact. Green products cause minimum harm to the environment. Different researches have defined differently the term green product. According to Ottman (1997) “Green Product and Environmental Products are used commonly to describe those that strive to protect or change or enhance the natural environment by conserving energy and / or resources and reducing or eliminating use of toxic agents, pollution and waste.” Chen & Chai (2010) describes green products as environmentally superior and which cause low impact over environment. Further they recognized that green products: use materials safe to environment, are recyclable, and require less packaging. According to Peter (2011), green products were produced in a more environmental friendly manner to have minimum impact over environment. Elkington (1999) identified that green products have recycled content, reduced packaging & uses less toxic material to reduce the negative impact over the environment. Shamdasami et al., (1993) described that green product do not pollute earth, and they can be recycled or conserved.
Green Marketing:
Consumers rising concern towards environment also affected the way they were working. They also started caring for environmental issues while marketing such as conservation of ecology, environmental sustainability etc. This evolved the concept of Green Marketing. Polonsky (1994) defined green marketing as “all activities designed to generate and facilitate any exchanges intended to satisfy human needs or wants, such that the satisfaction of these needs and wants occurs, with minimal detrimental impact on the natural environment.” Soonthonsmai (2007) defined “green marketing as the activities taken by firms that are concerned about the environment or green problems by delivering the environmentally sound goods or services to create consumers and society’s satisfaction.” Further Polonsky (2011) explained “Green marketing as the effort by a company to design, promote, price and distribute products in a manner which promotes environmental protection.” Pride and Ferrell (1993) defined “Green marketing, as an organization's efforts at designing, promoting, pricing and distributing products that will not harm the environment.” Peattie (1995) defined green marketing as “the holistic management process responsible for identifying, anticipating and satisfying the requirements of customers and society in a profitable and sustainable way.”

Green Consumers:
Green marketing efforts of companies are targeted towards such consumers who buy and use green products presently, intends to buy green products in near future. These consumers are termed as green consumers. Elkington (1994) defines green consumer as one who avoids products: (i) that are likely to endanger the health of the consumer or others; (ii) that cause significant damage to the environment during manufacture, use or disposal; (iii) that cause unnecessary waste; (iv) that use materials derived from threatened species or environments. According to Soonthonsmai (2007) consumers who are aware of and interested in environmental issues are called green consumers. Whereas Shrum, McCarty & Lowrey (1995) indentified green consumer as anyone whose purchase behaviour is influenced by environmental concern. They were considered as more educated & wealthier than average consumers (Shim, 1995; Mintel, 2009).

Green Purchase Behaviour:
Lee (2009) defined green purchasing behaviour as consuming products that are conservative, environmentally beneficial, and responding to environmental concern. According to Mostafa (2007) green purchase behavior refers to the consumption of products that are benevolent or beneficial to the environment, recyclable or conservable and sensitive or responsive to ecological concerns. According to Mainieri et al., (1997) green purchase behavior refers to purchasing and consuming products that have minimal impacts on the environment. There are different terms used interchangeably with green purchase behavior, such as green buying behavior (Kim, 2002; Kim and Choi, 2003; 2005), pro-environmental purchase behavior (Soutar et al., 1994; Tilikidou, 2007) and environmentally responsible purchase behavior (Follows and Jobber, 2000). Present paper is an attempt to study the relationship between consumers’ environmental concern, awareness about green products, attitude towards green products and their green purchase behavior.

LITERATURE REVIEW:
Concern for environment, desire to solve environmental problems and preserve the environment are the prominent reason behind environmental behaviour of the people (Hallin, 1995; and McCarty and Shrum, 2001). In this respect Roberts (1996) identified that environmentally conscious consumers are likely to perform green consumer behavior because they think & believe that ecological activities can improve the environment. Majority of consumers do not purchase products based on the environmental concern alone and they do not trade-off other product attributes for a better environment (Yan-Tang & Chan, 1998; Tang et al; 2004). But some researchers found that there is a link between attitude toward environmentally friendly products and consumers’ green purchase behavior (Foxall and Pallister, 2002; Vermeir and Verbeke, 2006; Wheale and Hinton, 2007). Tang et al; (2004) found that there exist gap between what consumers say & what they actually behave. Laroche et al; (2001) found from their study that positive attitude towards environment do not necessarily lead to actual environmentally friendly behavior which is supported by Tanner and Wölfing Kast (2003); Vermeir and Verbeke (2008); Webster (1975); Wheale and Hinton (2007). Research throughout India & abroad have identified several variables that affect their green purchasing behavior like environmental concern (Yeonsin & Sejung, 2005; Miller & Layton, 2001; Roberts, 1996); environmental awareness (Boztepe, 2012; Grob 1995; Hines et al., 1987; Nath et al., 2012b, Roberts, 1996; Roth & Perez, 1989; Schann & Holzer, 1990; Smith–Sebasto,1995); demographics (Boztepe, 2012; Harper & Makatouni, 2002; Ahmed & Juhdi, 2010); educational
level (Arbuthnot, 1977; Chan, 1996; Devall, 1970; Harry et al., 1969; Mostafa, 2006; Widegren, 1998); personal norm (Hopper & Nielson, 1991; Stern & Dietz, 1994; Vinning & Ebreo, 1992); attitude (Veluri, 2012; Katzev and Pardini, 1988); peer influence (Lee, 2009, Lee, 2010); word of mouth (Pickett-Baker & Ozaki, 2008; green product features (Boztepe, 2012); green promotion activities (Boztepe, 2012; Pickett-Baker & Ozaki, 2008); green purchase intention (Chan, 2001; Beckford et al., 2010; Brown, 2003); price (Boztepe, 2012; Bhat & Lawle, 1997; Lockie et al., 2002; D’Souza et al., 2006).

**Figure 1: Proposed Research Model**

In light of the literature review a research model was proposed by the researchers which is shown in figure 1 and three research hypotheses were formulated which are as follows:

- **H₁**: Consumers’ environmental concern significantly influences green purchasing behavior.
- **H₂**: Consumers’ awareness of green products significantly influences green purchasing behavior.
- **H₃**: Consumers’ attitude towards green products significantly influences green purchasing behavior.

**RESEARCH METHODOLOGY:**

For the purpose of present study the primary data was collected from the 50 respondents who reside in the Durg city with the help of a questionnaire. Questionnaire was divided in to two parts. Part one included questions related with respondents demographics. Part two included questions related with environmental concern, awareness of green products, attitude towards green products and green purchase behavior. Questions in part two were measured on Likerts’ five point scale (1= strongly agree to 5= strongly disagree). The data was collected during January 2018. The secondary data was collected from the books and journals. The collected data was analyzed using SPSS through percentage method and multiple regression analysis.

**DATA ANALYSIS AND INTERPRETATION:**

**Respondents Statistics:**

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>30</td>
<td>60</td>
</tr>
<tr>
<td>Female</td>
<td>20</td>
<td>40</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td><strong>Marital Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>28</td>
<td>56</td>
</tr>
<tr>
<td>Unmarried</td>
<td>22</td>
<td>44</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Below 20 years</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>21-30 years</td>
<td>27</td>
<td>54</td>
</tr>
<tr>
<td>31-40 years</td>
<td>14</td>
<td>28</td>
</tr>
<tr>
<td>41-50 years</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Above 50 years</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>50</td>
<td>100</td>
</tr>
</tbody>
</table>
Table 1 presents demographic profile of sampled respondents. Out of total respondents 60% were male and 40% were female. Majority of the respondents (56%) were married, whereas rests 44% were unmarried. Age wise 54% respondents were between 21-30 years, followed by 31-40 years (28%), above 50 years (8%), Below 20 years (6%), 41-50 years (4%) respectively. Respondent’s income ranged from below Rs. 10,000 to above Rs. 70,000 per month. 52% of the respondents had income between Rs. 10,001 to 30,000 per month, followed by income below Rs. 10,000 per month (24%), Rs. 30,001 to 50,000 (20%),Rs. 50,001 to 70,000 per month (2%), above Rs. 70,000 per month (2%) respectively. Respondents’ occupational categories were found as business (38%), government service (32%), student (16%), professionals (10%) and others (4%) respectively.

**RELIABILITY ANALYSIS:**

Reliability analysis of the instrument used for data collection was conducted and Cronbach’s alpha coefficient was used to check internal consistency of the constructs used in the study. As per the recommendation of Hair et al., (2010) all the constructs are considered reliable as their Cronbach’s alpha value is more than 0.7. Table 2, presents construct, no. of items in each construct and respective Cronbach’s alpha value.

**CORRELATION ANALYSIS:**

Relationships between constructs were examined through Pearson correlation analysis. For this purpose average score of multi-item construct was computed and used in the correlation analysis. According to Lind et al., (2010) correlations between variables are considered strong when the value of r lies between 0.05 to 1. Table 3, indicates that all variables were correlated at 0.01 level of significance.
REGRESSION ANALYSIS:

Correlation only indicates presence or absence of relationship, not the nature of relationship. Multiple regression analysis was performed to identify nature of relationship between consumers’ environmental concern, Consumers’ awareness of green products, Consumers’ attitude towards green products and their green purchase behavior.

Table 4: Regression Analysis

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>1.162</td>
<td>.309</td>
<td>3.759</td>
</tr>
<tr>
<td></td>
<td>Awareness of Green Product (AGP)</td>
<td>.191</td>
<td>.135</td>
<td>1.414</td>
</tr>
<tr>
<td></td>
<td>Environmental Concern (EC)</td>
<td>.260</td>
<td>.240</td>
<td>1.083</td>
</tr>
<tr>
<td></td>
<td>Attitude toward Green Product (AGP)</td>
<td>.206</td>
<td>.181</td>
<td>1.133</td>
</tr>
<tr>
<td></td>
<td>Adjusted R²</td>
<td></td>
<td>.734</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td></td>
<td></td>
<td>5.181</td>
<td>**</td>
</tr>
</tbody>
</table>

Dependent Variable: Green Purchase Behaviour (GPB)
*Significant at 0.05 level; **Significant at 0.01 level

The estimated regression equation for the model was formulated as: $Y = 1.162 + 0.194 X_1 + 0.208 X_2 + 0.218X_3$
where:
$Y$ = Green Purchase Behaviour  
$X_1$ = Awareness of Green Product  
$X_2$ = Environmental Concern  
$X_3$ = Attitude toward Green Product

Table 5, shows that F statistics ($F = 5.181$) was significant, at 1 percent level of significance, which confirms fitness of the model. The adjusted R² was 0.734 which denotes that all the three constructs together cause 73.4 percent variance with respect to green purchase behavior. The hypothesis testing results are shown diagrammatically through figure 2.

Figure 2: Tested Research Model

The results in table 4 and figure2 clearly indicate that environmental concern significantly influences green purchase behavior ($\beta = 0.208, t = 1.083, p < 0.05$). Thus $H_1$ is supported. $H_2$, that consumers’ awareness of green products significantly influences green purchasing behavior, is not supported ($\beta = 0.194, t = 1.414, p < 0.16$). $H_3$, that consumers’ attitude towards green products significantly influences green purchasing behavior, is supported ($\beta = 0.218, t = 1.133, p < 0.05$). Thus consumers’ environmental concern and attitude towards green product cause green purchase behavior.
FINDINGS, CONCLUSION AND RECOMMENDATIONS:

The analysis indicated that green purchase behavior of the respondents in the city of Durg is due to their environmental concern and attitude towards green products. Awareness about green products does not play any role in formulating their green purchase behavior. This research paper adds support to the findings of earlier studies of Roberts (1996); Yeonshin & Sejung (2005); Miller & Layton (2001) that environmental concern significantly influences green purchase behaviour. Further this study also contradicts the findings of Laroche et al., (2001) and supports the findings of Foxall and Pallister (2002); Vermeir and Verbeke (2006); Wheale and Hinton (2007) that attitude towards green products significantly influences green purchase behaviour. Awareness of green products did not emerge as significant predictor of green purchase behaviour.

Marketers should focus more towards creation of awareness among masses with respect to various green products available in the market through marketing campaigns, contests and other promotional activities. Increased awareness with respect to green products, their varieties, features, befits, price etc. may induce their purchase in future. Marketers may also segment people on the basis of demographics and their green purchase behaviour. They may also formulate suitable strategies to target and position them. Like any other research this study has some limitations. Authors picked only selected factors and their influence upon green purchase behaviour. Future researchers may identify few more factors that affect purchasing decision of respondents with respect to green products.

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